

REMARKS

In the Official Action, the Examiner rejected pending claims 1-21. By the present Response, Applicant amended claims 1, 3, 4, 8, 10, and 12-17, cancelled claim 6, and added new claims 30-37 to clarify features of the present techniques. Support for the new claims can be found in the Specification on: page 8, lines 6-31; page 11, lines 12-15; page 13, lines 23-24; and page 18, lines 13-33. Upon entry of the amendments and new claims, claims 1-5, 7-21, and 30-37 will be pending in the present application. Applicant respectfully requests reconsideration and allowance of the pending claims in view of the foregoing amendments and following remarks.

Rejections Under 35 U.S.C. § 102

The Examiner rejected claims 1-4, 10, 13 under 35 U.S.C. § 102 as being anticipated by Pinole et al. (3,682,823). Applicant respectfully traverses this rejection. In regard to claims 1-4, 10, and 13, the Examiner specifically stated:

Pinole discloses a process of oligomerization of alpha-olefins in the presence of a catalyst (the abstract).

On the paragraph bridging columns 3 and 4, Pinole clearly disclose that Raman spectroscopy is used to detect the residual unsaturation.

Regarding claims 3, 4, and 10, Pinole also disclose that according to the result of the Raman spectroscopy, the oligomerization process is adjusted by one oligomerization condition – hydrogenating these residual unsaturations in the oligomerization product (col. 4, lines 5-15).

Legal Precedent

Anticipation under Section 102 can be found only if a single reference shows exactly what is claimed. *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 227 U.S.P.Q. 773 (Fed. Cir. 1985). For a prior art reference to anticipate under Section 102, every element of the claimed invention must be identically shown in a single reference. *In re Bond*, 910 F.2d 831, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990). To maintain a proper rejection under section 102, a single reference must teach each and every element or step of the rejected claim. *Atlas Powder v. E.I. du Pont*, 750 F.2d 1569 (Fed. Cir. 1984). A *prima facie* case of anticipation under Section 102 requires a showing that each limitation of a claim is found in a single reference, practice or device. *In re Donohue*, 226 U.S.P.Q. 619, 621 (Fed. Cir. 1985).

Moreover, Applicants remind the Examiner that, during patent examination, the pending claims must be given an interpretation that is reasonable and consistent with the specification. *See In re Prater*, 415 F.2d 1393, 1404-05, 162 U.S.P.Q. 541, 550-51 (C.C.P.A. 1969); *see also In re Morris*, 127 F.3d 1048, 1054-55, 44 U.S.P.Q.2d 1023, 1027-28 (Fed. Cir. 1997); *see also M.P.E.P. §§ 608.01(o) and 2111*. Interpretation of the claims must also be consistent with the interpretation that those skilled in the art would reach. *See In re Cortright*, 165 F.3d 1353, 1359, 49 U.S.P.Q.2d 1464, 1468 (Fed. Cir. 1999); *see also M.P.E.P. § 2111*. As further explained in Section 2111.01 of the M.P.E.P., the words of the claim must be given their plain meaning unless the applicant has provided a clear definition in the specification. *See In re Zletz*, 893 F.2d 319, 321, 13 U.S.P.Q.2d 1320, 1322 (Fed. Cir. 1989). Again, the plain meaning refers to an interpretation by those of ordinary skill in the art. *See In re Sneed*, 710 F.2d 1544, 218 U.S.P.Q. 385 (Fed. Cir. 1983).

Features of Independent Claims 1 and 13 Omitted from Pinole

Independent claim 1, as amended, recites “monitoring an olefin oligomerization reaction by using Raman spectrometry equipment.” In sharp contrast, the Pinole reference discloses that an oligomer fed to a hydrogenation reaction is subjected to Raman-Laser spectroscopy *after oligomerization is complete* and downstream of the Pinole oligomerization reaction. *See* col. 3, line 50 – col. 4, line 9. Clearly, the upstream oligomerization reaction in Pinole is *not* monitored with Raman spectroscopy. Accordingly, for at least this reason, independent claim 1 and its respective dependent claims 2-4 and 10 are believed to be patentable over the Pinole reference.

Independent claim 13 recites “adjusting at least one oligomerization reaction condition in response to the first measurement.” Conversely, it is the downstream hydrogenation reaction, and not the upstream oligomerization reaction, that may be adjusted in response to the Pinole Raman testing. *See* col. 3, line 50 – col. 4, line 9. After all, the Pinole oligomerization reaction is complete prior to testing the oligomer product with Raman spectroscopy. *See id.* Further, the purpose of the Pinole Raman testing is to determine the amount of residual unsaturation in the oligomer that will be removed *in the hydrogenation reaction*. *See id.* Accordingly, for these reasons as well, independent claim 13 is believed to be patentable over the Pinole reference.

In conclusion, Applicant respectfully requests reconsideration and withdrawal of the present rejection of claims 1-4, 10, 13 under 35 U.S.C. § 102.

Rejections under 35 U.S.C. § 103

The Examiner rejected claims 14-21 under 35 U.S.C. § 103(a) as being unpatentable over Pinole (3,682,823). Additionally, the Examiner rejected claims 5-8 under 35 U.S.C. 103(a) as being unpatentable over Pinole in view of Schmucker et al. (6,115,528). Further, the Examiner rejected claims 9, 11, and 12 under 35 U.S.C. 103(a) as being unpatentable over Pinole in view of Tanaka et al. (5,750,817). Applicant respectfully traverses these rejections.

Legal Precedent

The burden of establishing a *prima facie* case of obviousness falls on the Examiner. *Ex parte Wolters and Kuypers*, 214 U.S.P.Q. 735 (PTO Bd. App. 1979). Obviousness cannot be established by combining or modifying the teachings of the prior art to produce the claimed invention absent some teaching or suggestion supporting the combination or modification. *See ACS Hospital Systems, Inc. v. Montefiore Hospital*, 732 F.2d 1572, 1577, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984). Accordingly, to establish a *prima facie* case, the Examiner must not only show that the combination includes *all* of the claimed elements, but also a convincing line of reason as to why one of ordinary skill in the art would have found the claimed invention to have been obvious in light of the teachings of the references. *Ex parte Clapp*, 227 U.S.P.Q. 972 (B.P.A.I. 1985).

Features Omitted from Pinole

In formulating the rejection of claims 14-21 under 35 U.S.C. § 103(a), the Examiner did not obviate the deficiencies of the Pinole reference discussed above with regard to independent claim 13. As for the remaining rejections under 35 U.S.C. § 103(a), the Examiner relied on the

Schmucker reference in rejecting dependent claims 5-8, and on the Tanaka reference in rejecting dependent claims 9, 11, and 12. However, the Schmucker and Tanaka references do nothing to obviate the deficiencies of the Pinole reference discussed above with regard to independent claim 1. Therefore, in sum, all of the dependent claims are believed to be patentable for the subject matter they separately recite as well as by virtue of their dependency on their respective allowable base claims. Moreover, there is no suggestion or motivation to modify or combine the cited references in the manner asserted by the Examiner or in the manner recited in the claims. Accordingly, Applicant respectfully requests withdrawal of the Examiner's rejections and allowance of the claims.

Request Evidence to Support Examiner's Use of Official Notice

As in the previous Response, Applicants request that the Examiner provide evidence to support the Examiner's use of Official Notice. *See Response to Office Action Mailed on May 18, 2004, page 11.* In rejecting dependent claims 14-21 under 35 U.S.C. § 103(a), the Examiner recognized that the Pinole reference contains many deficiencies in relation to the claimed subject matter. In an effort to cure these deficiencies, the Examiner has essentially taken Official Notice of facts outside of the record that the Examiner apparently believes are capable of demonstration as being "well known" in the art.

However, the Examiner has not provided evidence to support these assertions. Applicant emphasizes that the "well-known" facts asserted by the Examiner are not of a "notorious character" and are clearly not "capable of such instant and unquestionable demonstration as to defy dispute."

See M.P.E.P § 2144.03. Therefore, in accordance with M.P.E.P. § 2144.03, the Applicant, again, traverses and challenges the Examiner's use of Official Notice. *See* Response to Office Action Mailed May 18, 2004, page 11. Should the Examiner choose to maintain the rejection of claims 14-21 under 35 U.S.C. § 103(a), Applicant respectfully requests that the Examiner produce evidence in support of the Examiner's positions as soon as practicable during prosecution and that the Examiner add a reference to the rejection in the next Official Action. If the Examiner finds such a reference and applies it in combination with the presently cited references, Applicant further requests that the Examiner specifically identify the portion of the newly cited reference that discloses the allegedly "well known" elements of the instant claim, as discussed above, or withdraw the rejection.

Lastly, Applicant points out that only in limited circumstances is it appropriate for an examiner to take Official Notice of facts not in the record or to rely on "common knowledge" in making a rejection. Indeed, such rejections should be judiciously applied. M.P.E.P. § 2144.03. In particular, assertions of technical facts in the areas of esoteric technology or specific knowledge of the prior art must always be supported by citation to some reference work recognized as standard in the pertinent art. *Id.*

Conclusion

In view of the remarks and amendments set forth above, Applicant respectfully requests allowance of claims 1-5, 7-21, and 30-37. If the Examiner believes that a telephonic interview will help speed this application toward issuance, the Examiner is invited to contact the undersigned at the telephone number listed below.

General Authorization for Extensions of Time

In accordance with 37 C.F.R. § 1.136, Applicant hereby provides a general authorization to treat this and any future reply requiring an extension of time as incorporating a request therefor. Furthermore, Applicant authorizes the Commissioner to charge the appropriate fee as well as any additional fees which may be currently due to the credit card listed on the attached PTO-2038. However, if the PTO-2038 is missing, if the amount listed thereon is insufficient, or if the amount is unable to be charged to the credit card for any other reason, the Commissioner is authorized to charge Deposit Account No. 06-1315; Order No. CPCM:0008/FLE (33938US).

Respectfully submitted,

Date: February 23, 2005


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